SPACE SYSTEMS SYMPOSIUM (D1) Innovative and Visionary Space Systems Concepts (1)

Author: Dr. Andreas Tziolas Icarus Interstellar, United States, atziolas@icarusinterstellar.org

Mr. Konstantinos Konstantinidis Universität der Bundeswehr München, Germany, k.konstantinidis@unibw.de

PROJECT TIN TIN - INTERSTELLAR NANO MISSION TO ALPHA CENTAURI

Abstract

Currently there are no interstellar exploration missions planned or in progress. Even the Voyager spacecraft will not pass close to a neighboring solar system for tens of thousands of years. The pursuit of deep space and interstellar exploration studies has recently become a matter of critical debate, with Icarus Interstellar and the 100 Year Starship program drawing attention to the merits of pressing the boundaries of current and near future technologies towards such goals.

Project Tin Tin is a mission profile and spacecraft design feasibility program which will establish the science, propulsion, communications, power and materials which will be used to build interstellar precursor missions. The mission objectives are (a) to establish a program of utilizing space systems miniaturization technologies, (b) to create a template mission and spacecraft package for space-proofing interstellar systems and (c) to launch the first ever interstellar spacecraft to Alpha Centauri.

In this paper and presentation we describe the program, its goals and a minimum viable mission package which would allow the first ever interstellar mission towards Alpha Centauri be flown within the current decade.